



PATENT Docket No.: DX0882XK US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Wang *et al.*

Serial No.: 09/898,751

Filed: July 2, 2001

For: METHOD OF IMPAIRING
MOVEMENT OF A CLA⁺ MEMORY T-
CELL WITHIN OR TO THE SKIN OF
A MAMMAL BY ADMINISTERING
A CTACK ANTAGONIST

U.S. Patent No. 6,824,781

Examiner: Elizabeth Kemmerer

Art Unit: 1647

Certificate
JAN 25 2005
of Correction

Schering-Plough Corporation
Kenilworth, New Jersey 07033

Certificate of Corrections Branch
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

**REQUEST FOR A CERTIFICATE OF CORRECTION FOR OFFICE
MISTAKE UNDER 37 CFR 1.322(a)**

Patentees respectfully request that a Certificate of Correction, pursuant to 35 U.S.C. § 254 and 37 C.F.R. § 1.322(a)(i), be issued to correct errors in the above-referenced U.S. patent. The accompanying form PTO/SB/44 points out the error.

The exact locations where the errors occur are:

Page 1, second line of item 54 (title): change "MEMEORY" to - -MEMORY- -.

25 JAN 2005


Page 1, second line of item 60 (Related U.S. Application Data): change
"60/113,868" to - -60/113,858- -.

Column 69, line 8 (claim 1): Change "antigen" to - -antigen⁺- -

Since this change is necessitated by an office mistake, no fee is due.
If, however, any fee is required, the Commissioner is authorized to debit
Deposit Account No. 19-0365.

Early and favorable action on this request is earnestly solicited.

Respectfully submitted,

 12/15/04

Thomas Triolo
Agent for Applicant(s)
Registration No.: 48,001
Telephone No.: (908) 298-2347
Facsimile No. (908) 298-5388

Patent Department, K-6-1, 1990
SCHERING-PLOUGH CORPORATION
2000 Galloping Hill Road
Kenilworth, New Jersey 07033-0530

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

6824 781
PATENT NO : 09/898,751
DATED : July 2, 2001
INVENTOR(S) : Wei Wang, Elizabeth R. Oldham, Hortensia Soto, Ying Liu, Susan A. Hudak,
Bernard Homey, Janine M. Morales, Sirid-Aimee Kellermann, Leslie M. McEvoy, Edward P. Bowman, Albert Zlotnik

It is certified that error appears in the above-identified patent and that said Letters Patent
is hereby corrected as shown below:

Page 1, second line of item 54 (title): change "MEMEORY" to - -MEMORY- -.

Page 1, second line of item 60 (Related U.S. Application Data): change "60/113,868" to - -60/113,858- -.

Column 69, line 8 (claim 1): Change "antigen" to - -antigen+- -

MAILING ADDRESS OF SENDER:

Schering-Plough Corporation
2000 Galloping Hill Road
Kenilworth, New Jersey 07033

PATENT NO. 09/898,751

No. of additional copies



Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comment on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

25 JAN 2005



US006824781B2

(12) United States Patent
Wang et al.**(10) Patent No.: US 6,824,781 B2**
(45) Date of Patent: Nov. 30, 2004**(54) METHOD OF IMPAIRING MOVEMENT OF A CLA + MEMEORY T-CELL WITHIN OR TO THE SKIN OF A MAMMAL BY ADMINISTERING A CTACK ANTAGONIST****(75) Inventors:** Wei Wang, Palo Alto, CA (US); Elizabeth R. Oldham, Mountain View, CA (US); Hortensia Soto, Sunnyvale, CA (US); Ying Liu, Mountain View, CA (US); Susan A. Hudak, Redwood City, CA (US); Bernhard Homey, Palo Alto, CA (US); Janine M. Morales, San Francisco, CA (US); Sirid-Aimee Kellermann, Palo Alto, CA (US); Leslie M. McEvoy, Mountain View, CA (US); Edward P. Bowman, San Carlos, CA (US); Albert Zlotnik, Palo Alto, CA (US)**(73) Assignee:** Schering Corporation, Kenilworth, NJ (US)**(*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**(21) Appl. No.: 09/898,751****(22) Filed: Jul. 2, 2001****(65) Prior Publication Data**

US 2002/0160024 A1 Oct. 31, 2002

Related U.S. Application Data**(63)** Continuation-in-part of application No. 09/471,549, filed on Dec. 23, 1999, now abandoned.**(60)** Provisional application No. 60/136,570, filed on May 27, 1999, and provisional application No. 60/113,868, filed on Dec. 24, 1998.**(51) Int. Cl.⁷ A61K 39/395; C07K 16/24****(52) U.S. Cl. 424/158.1; 424/130.1; 514/2; 530/387.1****(58) Field of Search 435/4, 7.1, 325, 435/375; 514/2, 12; 424/85.1, 198.1, 130.1; 530/300, 350, 351, 387.1****(56) References Cited****U.S. PATENT DOCUMENTS**

5,665,345 A 9/1997 Yarchoan et al. 424/85.2

FOREIGN PATENT DOCUMENTS

WO WO 98/23750 6/1998

OTHER PUBLICATIONSKakinuma et al. Increased serum cutaneous T cell-attracting chemokine (CCL27) levels in patients with atopic dermatitis and psoriasis vulgaris. *J Allergy Clin Immunol* 111: 592-597, 2003.*Gillitzer et al. Chemokines in cutaneous wound healing. *J Leukocyte Biol* 69: 513-521, 2001.*Tannock and Hill. *The Basic Science of Oncology*, New York: McGraw-Hill, 1998, pp. 430-431, 495.*Kirby et al. Successful treatment of severe recalcitrant psoriasis with combination infliximal and methotrexate. *Clin Dermatol* 26: 27-29, 2001.*Keating et al. Infliximab, an updated review of its use in Chrohn's disease and rheumatoid arthritis. *Biodrugs* 16(2): 111-148, 2002.*Elliot et al. Treatment of rheumatoid arthritis with chimeric monoclonal antibodies to tumor necrosis factor alpha. *Arthritis Rheumatism* 36(12): 1681-1690, 1993.*Moreland et al. Treatment of rheumatoid arthritis with a recombinant human tumor necrosis factor receptor (p75)-fusion protein. *New Eng J Med* 337(3): 141-147, 1997.*Bondeson et al. Tumour necrosis factor as a therapeutic target in rheumatoid arthritis and other chronic inflammatory diseases: the clinical experience with infliximab. *Int J Clin Pract* 55(3): 211-216, 2001.*Reiss et al. CC chemokine receptor (CCR)4 and the CCR10 ligand cutaneous T cell-attracting chemokine (CTACK) in lymphocyte trafficking to inflamed skin. *J Exp Med* 194(10): 1541-1547, 2001.*Kunkel et al. Chemokines and the tissue-specific migration of lymphocytes. *Immunity* 16: 1-4, 2002.*Homey et al. CCL27-CCR10 interactions regulate T cell-mediated skin inflammation. *Nature Medicine* 8(2): 157-165, 2002.*M. Marra, et al., *GenBank*, Accession No. AA023970, Jan. 21, 1997. Definition: "mh95f08.r1 Soares mouse placenta 4NbMP13.5 14.5 *Mus musculus* cDNA clone Image:458727 5'similar to SW:GPR2_Human P46092 Probable G Protein-Coupled Receptor GPR2. [1] ;, mRNA sequence."Kouji Matsushima & Joost J. Oppenheim, *Cytokine* 1:2-13, Nov. 1989. "Interleukin 8 and MCAF: Novel Inflammatory Cytokines Inducible By IL 1 and TNF".Catherine J. McMahan, et al., *EMBO Journal*, 10(10):2821-2832, 1991. "A novel IL-1 receptor, cloned from B cells by mammalian expression, is expressed in many cell types".Michael D. Miller, et al., *Proc. Natl. Acad. Sci., USA* 89:2950-2954, 1992. "The human cytokine I-309 is a monocyte chemoattractant".Janine Morales, et al., *Proc. Natl. Acad. Sci., USA*, 96(25):14470-14475, Dec. 7, 1999. "CTACK, a skin-associated chemokine that preferentially attracts skin-homing memory t cells".Joost J. Oppenheim, et al., *Ann. Rev. Immunol.* 9:617-648, 1991. "Properties of the Novel Proinflammatory Supergene 'Intercrine' Cytokine Family".

(List continued on next page.)

Primary Examiner—Elizabeth Kemmerer**Assistant Examiner**—Bridget E. Bunner**(57) ABSTRACT**

Agonists or antagonists of CTACK or Vic chemokines, and various methods of use in dermatological and related applications are provided. In particular, the method makes use of fact that the CTACK or Vic chemokines are specifically capable of inducing movement of a skin cell subset. Moreover, matching of ligand with GPR2 receptor in mammals provides methods of use.

13 Claims, No Drawings

69

What is claimed is:

1. A method for impairing movement of a cutaneous lymphocyte-associated antigen⁺ (CLA⁺) memory T-cell within or to the skin of a mammal, said method comprising administering to said mammal an effective amount of an antibody against cutaneous-T-cell-attracting chemokine (CTACK), whereby administration of said antibody impairs movement of said cutaneous lymphocyte-associated antigen memory T-cell within or to the skin of said mammal.

2. The method of claim 1, wherein said movement is within said skin.

3. The method of claim 1, wherein said antibody neutralizes cutaneous-T-cell-attracting chemokine.

4. A method for treating a patient suffering from a skin disorder selected from the group consisting of allergic-contact dermatitis and psoriasis comprising administering an effective amount of an antibody against cutaneous-T-cell-attracting chemokine.

5. The method of claim 1, wherein said administering is local.

70

6. The method of claim 1, wherein said cutaneous lymphocyte-associated antigen⁺ memory T-cell moves into the dermis or epidermis of said skin.

7. The method of claim 4, wherein said skin disorder is allergic-contact dermatitis.

8. The method of claim 4, wherein said skin disorder is psoriasis.

9. The method of claim 1, wherein said administering is systemic.

10. The method of claim 1, wherein said administering is topical.

11. The method of claim 1, wherein said administering is subcutaneous.

12. The method of claim 1, wherein said administering is intradermal.

13. The method of claim 1, wherein said administering is transdermal.

* * * * *